

# nih record

## Fauci Receives National Medal of Science

By Jennifer Zoon

When NIAID director Dr. Anthony Fauci began his investigations into the acquired immune deficiency syndrome in the early 1980s, he had no inkling that a quarter century later this research would help win him the highest U.S. honor in science. On July 27, he attended a White House ceremony where President George Bush awarded him a 2005 National Medal of Science.

After a 2-year selection process, Bush and a committee of 13 scientists chose to honor Fauci “for pioneering the understanding of the mechanisms whereby the human immune system is regulated, and for his work on dissecting the mechanisms of pathogenesis of human immunodeficiency virus that



Dr. Anthony Fauci is honored by President Bush.

SEE MEDAL OF SCIENCE, PAGE 8

*‘We’re All Ears’*

### NIH Meets with Stakeholders to Examine Peer Review

By Belle Waring

Flanked by his working group co-chairs Drs. Keith Yamamoto and Lawrence Tabak, NIH director Dr. Elias Zerhouni recently met with almost 200 members of the scientific community at the Doubletree Hotel in Washington, D.C., to hear comments on the NIH peer review process.

“Peer review is the foundation of NIH success,” said Zerhouni. “As I travel the world, I notice how other countries want to emulate us. But no system remains the same, and peer review cannot remain high quality unless we have a transparent process. We’re all ears.”

The new working group—the external advisory committee to the director working group on peer review—is one of two; its counterpart is the internal NIH steering committee working group. Both share the goal of maximizing the efficacy and effectiveness of peer review.

“This is not just a tactical readjustment,” said Yamamoto of the University of California, San Francisco. “We want bold visions and revisions.”

SEE PEER REVIEW, PAGE 4



Dr. David Metzger discusses drug abuse and HIV.

### The Drug and Disease Risk Changing Dynamics of HIV/AIDS Examined

By Sarah Schmelling

As long as scientists have studied the HIV epidemic, they’ve been aware of the large role drug abuse plays in the spread of the virus. Recently,

they have started to look more closely at a specific facet of drug abuse: the behavior that leads someone to risk both addiction and possible HIV infection. What do we know about why people take these risks and how does that knowledge help us understand the way the epidemic is changing?

These questions were at the core of “Drug Abuse and Risky Behaviors: The Evolving Dynamics of HIV/AIDS,” a recent 2-day forum sponsored by NIDA, with many other institutes collaborating.

SEE DRUGS AND HIV, PAGE 6

ABOVE • It’s time again to name that campus feature. See contest on p. 12.

## features

[Fauci Is Sixth NIH National Medal of Science Winner](#) 1

[EPA Honors NIH for Its Green Efforts](#) 3

[NIH Hosts New Internship for Women](#) 5

[Test Your Skill in Identifying Campus Features](#) 12

## departments

[Briefs](#) 2

[Digest](#) 10

[Volunteers](#) 11

[Seen](#) 12



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**NIH Record Office**  
Bldg. 31, Rm. 5B41  
Phone (301) 496-2125  
Fax (301) 402-1485

**Web address**  
<http://nihrecord.od.nih.gov>

**Editor**  
Richard McManus  
[rm26q@nih.gov](mailto:rm26q@nih.gov)

**Assistant Editor**  
Carla Garnett  
[cg9s@nih.gov](mailto:cg9s@nih.gov)

**Staff Writers**  
Jan Ehrman  
[je48b@nih.gov](mailto:je48b@nih.gov)

Sarah Schmelling  
[ss1116y@nih.gov](mailto:ss1116y@nih.gov)

Belle Waring  
[bw174w@nih.gov](mailto:bw174w@nih.gov)

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## briefs

### NIH Bone Marrow Drive Set, Aug. 30

The NIH chapter of Blacks In Government (BIG) and the NIH Marrow Donor Program are recruiting volunteers to join the National Bone Marrow Registry. A bone marrow registration drive will be held Thursday, Aug. 30 from noon to 1 p.m. in Lipsett Amphitheater, Bldg. 10. Marrow transplants are life-saving treatments for people with leukemia, lymphoma and many other diseases. The registry contains more than 10 million potential donors. Because tissue type is inherited, matches are most likely made with someone from a similar racial and ethnic background. BIG and the donor program are working to improve the registry's diversity. For details about the NIH event, call Earl Simmons at (301) 435-4365.

### NIH Hosts Vitamin D Meeting, Sept. 5-6

The NIH Office of Dietary Supplements is sponsoring the conference "Vitamin D and Health in the 21st Century—An Update" Sept. 5-6 in Masur Auditorium, Bldg. 10. At this follow-up to a 2003 NIH Vitamin D conference, speakers will present the salient points of past and emerging research, including an ODS-sponsored Agency for Healthcare Research and Quality evidence report. The goals are to evaluate the efficacy and safety of vitamin D; identify gaps in knowledge on the efficacy and safety of vitamin D; inform NIH and other federal agencies on vitamin D and health research priorities; and to disseminate the conference findings to the broad scientific nutrition community. The conference—cosponsored by NCI, NIAMS and the American Society for Nutrition—is free and open to the public. Attendees are asked to register at [vitamindandhealth.od.nih.gov](http://vitamindandhealth.od.nih.gov), where more conference material is available.

### NIDA Journal Changes Name

The National Institute on Drug Abuse is changing the name of its scientific journal *Perspectives to the Journal of Addiction Science & Clinical Practice*, beginning with the November issue. The new title is designed to better reflect the journal's commitment to covering the exchange of ideas among researchers, clinicians and others in the field of addiction science. NIDA will also increase the number of issues from once to twice a year to accommodate the sizeable portfolio of scientific literature being produced in the growing field of drug abuse and addiction research. The peer-reviewed NIDA publication is the most widely distributed journal on addiction science.

### 2-Day Functional Genomics Symposium Set

The fifth annual Symposium on the Functional Genomics of Critical Illness and Injury, "Forging a Critical Alliance: Are We Meeting the Need?" will be held at Natcher Conference Center on Wednesday, Nov. 14 from 8 a.m. to 6:30 p.m. and Thursday, Nov. 15 from 8 a.m. to 5:30 p.m. The event will assemble multidisciplinary acute and critical care specialists, microbiologists, immunologists, cell biologists, molecular biologists, experts in high-throughput technologies and computational scientists to discuss the application of functional genomic approaches to critical illness and injury. Deadline for submitting abstracts is Sept. 14. Registration ends Oct. 15. For more information visit [www.strategicresults.com/fg5](http://www.strategicresults.com/fg5).

### Principles of Clinical Research Class

Registration for the 2007-2008 "Introduction to the Principles and Practice of Clinical Research" has begun. The course will run from Oct. 15 through Feb. 25, 2008. The deadline for registering is Oct. 5. Classes will be held on campus on Monday and Tuesday evenings from 5 to 6:30. There is no charge for the course but purchase of a textbook is suggested. A certificate will be awarded upon successful completion of the course, including a final exam. For more information or to register, visit [www.cc.nih.gov/researchers/training/ippcr.shtml](http://www.cc.nih.gov/researchers/training/ippcr.shtml) or call (301) 496-9425.

### Katz Receives 'Change It' Award

*NIAMS director Dr. Stephen Katz was recently presented the "Change It" award by Parent Project Muscular Dystrophy President and CEO Pat Furlong. The award was given "in recognition of his tireless work on behalf of the Duchenne and Becker Muscular Dystrophy community and in support of our nation's overall biomedical research agenda." As chair of NIH's muscular dystrophy coordinating committee, Katz coordinated development of the Muscular Dystrophy Research and Education Plan for the NIH and a subsequent document, the Action Plan for the Muscular Dystrophies, which outlines and prioritizes specific aims that now are being pursued by NIH-funded researchers, government agencies in addition to NIH and voluntary organizations. More information about the plans, the committee and NIH research on muscular dystrophies is available at [www.ninds.nih.gov/find\\_people/groups/mdcc/index.htm](http://www.ninds.nih.gov/find_people/groups/mdcc/index.htm).*



*The Greening of Bldg. 36***NIH Earns EPA Award for Environmental Leadership**

By Belle Waring

The Environmental Protection Agency recently recognized NIH for its commitment to recycling, reducing mercury and remediating hazardous substances prior to demolition. The achievement award was presented at the Federal Environmental Symposium held at the Natcher and Lister Hill conference centers. Accepting on behalf of NIH was Kenny Floyd, director of the Division of Environmental Protection.

EPA also commended NIH for being the first federal facility in Maryland to join its National Partnership for Environmental Priorities program. NPEP is a voluntary program striving to reduce the use or release of 31 chemicals, including mercury, beyond regulatory requirements.

“Eliminating the unnecessary use of mercury in our facilities is the gram of prevention worth a metric ton of cure for hazardous debris,” said Capt. Ed Rau, special assistant, Division of Environmental Protection, ORF. Also known as the “The Mad Hatter” (last seen giving out mercury-free thermometers on Earth Day), Rau heads the Mercury-Free Program at NIH.

The original Mad Hatter, a character in Lewis Carroll’s *Alice’s Adventures in Wonderland*, may have suffered neurological damage caused by inhaling mercury fumes. Mercury was once used in the hat-making process.

“Mercury is now the primary contaminant of concern as we decommission and renovate our old lab buildings,” said Rau. “Other hazardous substances like lead and asbestos are much easier to locate and remove. They tend to be found in fixed locations; mercury moves.”

Mercury, a liquid metal, is a toxic, persistent pollutant that evaporates, passes from the atmosphere into the watershed and then accumulates in the food chain as big fish eat little fish. Mercury has traditionally been used to make thermometers, switches and light bulbs. The nervous system is sensitive to mercury and exposure can damage the brain and kidneys. Pregnant women can pass the mercury in their own bodies to their unborn babies; prenatal exposure may put the fetus at risk.



This means demolition isn’t what it used to be—no more one-shot implosions. As part of the pilot deconstruction project of Bldg. 36, NIH achieved these green goals:

- Removed and recycled more than 14,000 mercury-containing fluorescent lamps
- Removed and recovered more than 2,800 pounds of mercury-containing debris and other waste
- Removed and recovered 22,000 pounds of ballast materials, some of which contained PCBs
- Recycled more than 5,800 tons of non-hazardous debris, such as concrete and scrap metal
- Recycled 100 percent of remaining non-hazardous debris.

“Building demolition debris containing as little as 200 micrograms of mercury per liter of extract must be disposed of as hazardous waste, which is very problematic and costly,” said Rau. “A few dollars spent now to replace thermometers and other devices with mercury-free alternatives will save millions of dollars in spill clean-ups and future decontamination costs when these facilities are decommissioned.”

As we build anew, we are now required to implement more stringent levels of sustainability under the federal certification system. These guidelines give NIH “green credits” for how we took down the old building, as well as for the design and construction standards of the new. The deconstruction of Bldg. 36 thus leaves its successor a green legacy. Glad, Hatter? 🍵

*The Environmental Protection Agency, in concert with its National Partnership for Environmental Priorities, recently presented NIH an achievement award and commendation. At the ceremony were (from l) Noah Borenstein, EPA; Capt. Ed Rau, special assistant, Division of Environmental Protection, ORF; Maria Parisi Vickers, deputy director, EPA Office of Solid Waste; Kenny Floyd, director, Division of Environmental Protection, ORF; Sharon Perez-Suarez, EPA; Christina Guitar, EPA.*

## PEER REVIEW

CONTINUED FROM PAGE 1

Peer review is the process of evaluating research grant applications; its purpose is to give these applications rigorous, fair and timely attention. Peer review is the cornerstone of the NIH mission to fund the most promising biomedical and behavioral research.

Over the last 60 years, the peer review process has been vetted several times. The current push comes in the context of straitened federal funding, a dearth of seasoned reviewers and an increase in application volume, complexity and scope. Since 1987, NIH has seen a tenfold increase in the number of applications.

In response, NIH is now seeking ideas in a series of regional meetings with the scientific community, patient advocacy groups and other stakeholders, including the institutes and centers.

The ultimate goal of the study is to optimize the entire system used by NIH to support biomedical and behavioral research. While welcoming suggestions about the review process, NIH also seeks feedback on a wide range of issues including how to structure grant mechanisms so that scientists spend less time on the application process. This requires comprehensive input from the scientific community. Zerhouni emphasized that NIH is particularly interested in creative, concrete suggestions, even if this involves radical changes to the current approach.

NIH has also posted a Request for Information (RFI); its deadline has been extended to Sept. 7.

“We encourage your membership and constituent groups to offer as robust a response as possible,” said NIDCR director Tabak. “We will very, very rapidly gather information to be synthesized by the two working groups and considered by NIH leadership. Then we can develop pilot experiments, evaluate the pilots, develop and implement the plan and expand the most successful among them.”

Results from the ACD working group go to the full advisory committee to the director in December, when the internal group will also present its findings. Both groups plan to meet in January 2008 to develop a set of integrated recommendations.

To submit an RFI response, visit [http://grants.nih.gov/grants/guide/rfi\\_files/rfi\\_peer\\_review\\_add.htm](http://grants.nih.gov/grants/guide/rfi_files/rfi_peer_review_add.htm); the email address is [PeerReviewRFI@mail.nih.gov](mailto:PeerReviewRFI@mail.nih.gov). A summary of response results will be available to the public on the NIH peer review web site <http://enhancing-peer-review.nih.gov>. 



*Melanie Martinez (l), NIMH outreach liaison, meets with Dr. Remi Quirion, INMHA scientific director.*

## NIMH Program Recognized as International Role Model

How can public health organizations help bridge the gap between research and clinical practice? The Canadian Institutes of Health Research (CIHR) found the answer in NIMH's Outreach Partnership Program. The program, which focuses on public outreach and education, became a model for CIHR's Institute of Neurosciences, Mental Health and Addiction (INMHA) outreach initiative. The initiative offers awards to Canadian non-governmental organizations dedicated to public health outreach.

In honor of its pioneering example, NIMH's program was featured at INMHA's annual meeting, held recently in Toronto. Melanie Martinez, NIMH outreach liaison for the partnership program, presented the NIMH program.

“The Outreach Partnership Program has proven to be an excellent example of the important relationship that needs to be established between the government's science-based institutions and the non-governmental organizations,” said Dr. Remi Quirion, INMHA scientific director.

The annual meeting, titled “A Feast of Science and Partnerships,” stressed the importance of a broad range of partnerships to facilitate increased communication about science to patients, families and the public. It was held in conjunction with the Canadian Association for Neuroscience.

Started in 1999, the NIMH Outreach Partnership Program enlists national and state organizations to assist in disseminating the latest scientific information about mental disorders, alcoholism and drug addiction. The program strives to reduce the stigma and discrimination associated with these illnesses. There are currently 51 state partners, one in each state and the District of Columbia, and more than 80 national partners. The program is an initiative of NIMH, with support from NIDA, and in cooperation with the Substance Abuse and Mental Health Services Administration. 



*NIMH's Dr. Esther Sternberg welcomes the interns to the summer program.*

### Innovative Women's Internship Program Launches

One conversation can sometimes lead to big things. Last year, after a lecture at a conference on skin and stress in New York, Dr. Esther Sternberg of NIMH started talking with Lynne Greene, global president of Clinique. When Greene said she would like to find a way to encourage young women and minority students to pursue careers in nursing and science, an idea for a new kind of internship was formed.

"We decided that as a start, a summer student program could be a great vehicle to benefit young women, science and the NIH," said Sternberg at the kick-off for the program earlier this summer. "This fills a great gap and a great need."

The Women's Health Summer Internship Program provided an 8- to 10-week intensive biomedical research experience here for three women who were selected through a "very competitive" process, Sternberg said. The selection committee included members of the Intramural Program on Research on Women's Health, the National Institute of Nursing Research and the Office of Intramural Training and Education. The internships were funded by the Foundation for NIH through a grant from Clinique.

The kick-off luncheon, held in the elegant chapel and lecture hall of the Cloister, served as a welcome for the three young women. They were selected among a large pool of applicants focusing on dermatology and skin cancer with a secondary preference for relevance to nursing and gender differences.

Neha Agarwal was chosen to work with principal investigators Dr. David Salomon and Dr. Barbara Vonderhaar of NCI. Laurel Cummings was paired with Dr. David Schlessinger of NIA and Jean Suh worked with Dr. Maria Morasso of NIAMS. The research experience was supplemented with instruction in lab safety, a lecture series and career development workshops. The program culminated in a trip to New York



#### **Left:**

*On the left side of the staircase are interns (from top) Neha Agarwal, Laurel Cummings and Jean Suh. On the right are some of the NIH scientists they worked with: (from top) Dr. David Salomon, Dr. Barbara Vonderhaar and Dr. Maria Morasso.*

#### **Below:**

*Cummings explains her work to Sternberg at a poster presentation in New York City.*

PHOTOS: B. VARTAN BOYAJIAN & DOUG HANSEN



where the interns presented their projects at a Poster Day.

"We're very excited to be a part of this; it's an absolute privilege," said Phebe Farrow Port, Clinique's vice president of global management strategies, in an overview of the program and the company's involvement at the luncheon. She helped present the new interns with white lab coats (and some Clinique products). She also stressed, along with the other organizers, the hope that this will lead to bigger programs focused on "furthering research for the good of young women and the good of the community."

"I know you're going to have some amazing outcomes," she said.—**Sarah Schmelling** 

## DRUGS AND HIV

CONTINUED FROM PAGE 1

The dynamics of the HIV epidemic have changed, said NIDA director Dr. Nora Volkow. Whereas initially, 30 percent of HIV cases resulted from injection drug use, more effective treatments for injection drug users lowered this percentage. Since these treatments were introduced, however, “there’s been a new phase in the development of drug abuse and the HIV epidemic that has to do with the effects of acute drug intoxication on how people engage in behaviors they would otherwise not do.”

Because less is known about this new phase, she said “this is a good point to try to assess our portfolio and determine new strategies that we can use to take advantage of new opportunities.”

### AIDS: 26 Years and Counting

To start the meeting, Dr. Anthony Fauci, director of NIAID, provided what he

called an “historical blitz” of the HIV epidemic. He said that in June 1981, when he first saw an article in *Mortality and Morbidity Weekly Report* about chronic pneumonia in five gay men in Los Angeles, it “struck me, but didn’t stop the day for me.” Only a month later, when he read another report on cases of Kaposi’s sarcoma and pneumocystis pneumonia in New York and San Francisco, “it became very clear to me that I would be changing my career.”

Now, he explained, an estimated 39.5 million people are living with HIV, including 2.3 million children under 15 years old, and 90 percent of people with HIV are in the developing world. In 2006, approximately 4.3 million people became infected with the virus and 2.9 million people died of AIDS.

In the U.S., more than 1 million people are living with HIV, 25 percent of whom are unaware of their infection, Fauci said. “This is important because 65 percent of the new cases are being transmitted by people who do not know they are infected.”

The good news in HIV/AIDS research is treatment. There are now more than 25 FDA-approved antiretroviral drugs. However, only about 28 percent of people in need of antiret-

roviral drugs in low and middle income countries are receiving treatment, which tells us “our most spectacular success in drug delivery can’t keep up with the bottomless pit of people who need it,” Fauci said. This is where prevention comes in.

To elaborate on this topic, Dr. David Metzger, a research associate professor and director of the HIV prevention research division at the University of Pennsylvania, discussed the impact of drug abuse treatment on HIV infection. Historically, research shows that people in drug treatment who remain in treatment “have much lower risk behavior and infections,” he said.

And though “most people look at the data and think that injection drug users are the only drug users at risk of HIV infection,” studies show that use of other drugs, including alcohol and amphetamines, also plays a role.

Drug treatment can prevent HIV infection, he explained, because effective treatment reduces the frequency of drug use, leading to fewer drug-related risk behaviors and to fewer new infections; because it leads to increased access to HIV treatment; and because being in drug treatment leads to increased adherence to HIV medications for those already infected, which in turn leads to lower rates of new infections.

### The Brain on Drugs

One way of learning more about why people engage in the risky behaviors that lead to drug abuse and HIV infection is by looking at the brain. Dr. Gregory Berns, associate professor of psychiatry and behavioral sciences at Emory University School of Medicine, discussed a relatively new approach to studying decision-making: neuroeconomics.

Usually, when he says this word, “I get these puzzled looks,” Berns explained. But by merging neuroscience and economics, researchers in this area aim to “learn how the brain makes decisions,” he said. “In terms of risky decision-making, we can determine where this is coming from in the brain and what we can do about it.”

He displayed a photo of a woman gleefully holding up a lottery ticket. “Now this woman is clearly happy with her decision,” he said. “And this decision is questionable, right?”

Lottery tickets are a perfect example of risky decision-making, he explained. “We know what the odds of winning are. If you do the math, it still makes no sense to buy them. Well, lotteries wouldn’t exist unless a lot of people bought tickets, so something else is going on.”



*Dr. Nora Volkow, director of NIDA, welcomes the audience to the forum, “Drug Abuse and Risky Behaviors: The Evolving Dynamics of HIV/AIDS.”*



*Above: Dr. Gregory Berns discusses neuroeconomics. Right: NIAID director Dr. Anthony Fauci gives an historical overview of the HIV epidemic.*

In lottery ticket purchasing and in drug abuse, he said, “something changes between conscious evaluations and actual behavior.” This is where neuroeconomics comes into the mix: trying to understand what happens biologically in the brain that predisposes people to do irrational things.

Berns explained that a key insight of neuroeconomics is that “people make decisions not by what happens to them, but by what they expect to happen.” Knowing this, researchers have been using a specific kind of MRI to look at areas of the brain that become active when people expect something from a decision they make. Results show that whether a person is expecting a monetary award, tasty food or a social reward, the brain shows activity in the same place. “This is a big deal,” Berns said. “Because whatever the thing people are expecting to get, the brain really does seem to convert it into a common currency.”

These findings suggest promising approaches to using brain imaging to predict decisions, an area of research further explained by Dr. Martin Paulus, a professor in residence in the department of psychiatry at the University of California, San Diego. He discussed utilizing neuroimaging to predict high-risk behaviors in methamphetamine users, concluding that in early studies, MRI shows potential for predicting whether a former meth user will relapse.

### **An Ongoing Discussion**

These speakers were just the start. Over 2 days, experts delved more deeply into drug treatment and HIV prevention; looked at drug abuse and HIV in relation to different racial groups and in studies of women and youth; and discussed HIV prevention in criminal justice populations, HIV testing and counseling policy and expanding testing and counseling into community settings.



Dr. Jacques Normand, director of NIDA’s AIDS Research Program and moderator of the event, concluded by suggesting that participants work to sustain the discussion and interaction the conference initiated.

This is important because, as Fauci noted at the start, in the HIV epidemic much has been accomplished, but there is much yet to do. “History will judge us as a global society by how well we address the next 25 years of HIV/AIDS,” he said, “as much as by what we have done in the first 25 years.”

### **Hunter Named NCMHD Deputy Director**

Dr. Joyce Hunter has been named deputy director of the National Center on Minority Health and Health Disparities.

An 18-year NIH veteran, she is a cardiovascular physiologist and award-winning administrator. Prior to joining NCMHD, Hunter served as deputy director in the Division of Extramural Activities at the National Institute of Diabetes and Digestive and Kidney Diseases. She has received the NIH Director’s Award, NIH Award of Merit and the NIDDK Merit Award.

“Dr. Hunter’s long experience in managing research programs at the NIH make her perfectly suited to be my deputy and direct the day-to-day operations of NCMHD,” said Dr. John Ruffin, center director.

Hunter began her NIH career at the National Heart, Lung, and Blood Institute, where she progressed from being a program officer to chief of the vascular research training and career development group, and later chief of the clinical studies and training scientific review section. She has also served as chair or member of several trans-NIH committees. In addition, Hunter has received international recognition from the Bolivian-American Medical Society, Inc., for her work contributing to the development of minority scientists.



## MEDAL OF SCIENCE

CONTINUED FROM PAGE 1

has served as the underpinning for the current strategies for the treatment of HIV disease.” Fauci was among the thirty 2005 and 2006 National Medal of Science laureates honored at the ceremony for their work in science and technology.

Since the National Medal of Science was created by Congress in 1959, six NIH scientists have received the award. The legacy began in 1964 with Dr. Marshall Nirenberg, who later won the Nobel Prize. The next four awardees included: Dr. Kenneth S. Cole of NINDS in 1967; Dr. Bernard Brodie of what was then the National Heart Institute in 1968; Dr. Robert J. Huebner of NCI in 1969; and Dr. Earl R. Stadtman of the heart institute in 1979. Fauci is the first NIAID scientist—as well as the first NIH scientist in nearly 30 years—to receive this award.

Fauci launched his career at NIAID in 1968 after graduating from Cornell Medical School and completing an internship and residency at New York Hospital-Cornell Medical Center. As a newcomer to NIH, he conducted research on the complex functions of the human immune system. The conditions that cause our immune systems to malfunction fascinated him and he pursued projects on immunological diseases about which scientists knew relatively little. His laboratory investigations and clinical trials led to life-saving treatments for immune-mediated diseases such as Wegener’s granulomatosis.

When AIDS was recognized in the early 1980s, mysteriously deteriorating the immune system of those infected, it initially seemed concentrated in certain populations, including gay men and intravenous drug users. Fauci changed the direction of his basic and clinical research and delineated many of the pathogenic mechanisms of HIV disease. Also, at that time, activists were frustrated with the lack of access to life-saving drugs and the output of AIDS research. In response, Fauci, who had become NIAID director in 1984, asked for an increase in government funding and talked with the activists to learn more about the pain and damage the disease had caused and to hear their ideas about treatment and prevention.

In a 2002 interview with the magazine of his undergraduate alma mater, the College of the

Holy Cross, Fauci emphasized that these interactions were invaluable to science and his professional growth. “I went to San Francisco, to the Castro district, and I discussed the problems they were having, the degree of suffering that was going on in the community, [and] the need for them to get involved in clinical trials, since there were no other possibilities for them to get access to drugs.”

His efforts helped improve health care for HIV-infected individuals and sparked the dialogue between AIDS activists and NIH officials that remains strong today.

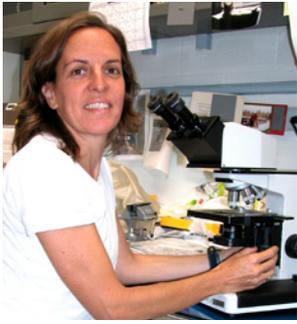
Fauci treats patients and heads a research laboratory focused on HIV/AIDS, in addition to carrying out his administrative duties as NIAID director. His career of scientific enterprise and leadership has resulted in many people around the world leading healthier lives. 🌐



### Laffan Joins NIGMS’s Review Office

*Dr. John Laffan recently joined NIGMS as a scientific review administrator in the Office of Scientific Review. His responsibilities include managing the review of selected research training, program project, center and Minority Biomedical*

*Research Support program grant applications. He was previously an associate professor in the department of microbiology at East Tennessee State University in Johnson City, where he also served as an adjunct assistant professor in the department of obstetrics and gynecology and an adjunct associate professor in the department of pathology. There, his research focused on the molecular aspects of biological control mechanisms. Laffan earned a B.A. in biology from Hamilton College and a Ph.D. in molecular biology and biochemistry from Wesleyan University. He later conducted postdoctoral research at Wesleyan and the University of Colorado at Boulder.*



## Zerfas Makes National Biathlon Team

By Belle Waring

Biologist Patricia Zerfas, who recently placed third overall in the U.S. National Biathlon Games, is set to compete in the 2007

International Biathlon Summer World Championships in Estonia. The event will combine cross-country running with riflery in three races, Sept. 4-9.

"I never thought I'd get on the team," says Zerfas, who has worked at NIH for more than 11 years, currently as an electron microscopist in OD's Diagnostics and Research Services Branch. "It's all kind of a surprise."

Zerfas's athletic trajectory is so uncommon that it makes her an outlier.

"I'm 45," she says. "And the other woman going with me to Estonia? She's only 15. It's very unusual for someone my age; it's the first time I've been on a national team. A lot of them have been to the Olympics; I've never competed on this level."

Zerfas didn't come up through the typical programs and training camps. Before the U.S. games on July 15, when she won her spot, "I'd only been doing shooting for 7 weeks," she says. To compensate, she ran superfast: "I made up huge in running."

The three cross-country segments will vary in length: for the sprint she'll go 3K, for the pursuit and mass start between 5 and 10K.

Once she found a shooting coach, she had 6 weeks to train before flying with her husband, Dr. Jesse Blankenship, to the games in Otepää, a resort and parkland. Up until now she's competed in only two biathlons so her sports career shows a meteoric spike. Although she's always been active, she didn't start racing seriously until 5 years ago.

"Before that," she notes, "I was in grad school, then working; I didn't have time to train." Now each week she spends 4 hours at the shooting range, runs 50 miles and spends 3 days lifting weights.

Meanwhile, she's got a paper coming out on a gene found in *Aspergillus fumigatus*, a fungus that causes human infections and allergies. Because athletic competition offers a way to escape job pressure, she says, it actually helps her focus on her scientific work.

"I can't think about anything else out there"—and in Otepää, she'll be dashing over forested hills and shooting a .22 rifle at a target 50 meters away. "Here," she says, "a lot of my images are at about the 10,000 level [of magnification]. Out there, I don't even wear glasses." 📷

## NLM Launches 'Turning The Pages' Online in French

Vive la différence! With assistance from library colleagues in Paris, the National Library of Medicine now offers the web version of its popular interactive program Turning The Pages (TTP) in French as well as in English. This unique system, allowing users to "touch and turn" the digitized pages of rare historical volumes in a highly realistic way, is available on site at NLM and to users worldwide at [www.nlm.nih.gov/turningthepages](http://www.nlm.nih.gov/turningthepages). The French version debuted on July 14, Bastille Day.

Turning The Pages gives users a virtual way of letting their fingers do the walking through treasures from the NLM collection—there are even page-turning sound effects, to enhance the experience—without posing any danger to these centuries-old items. Equipped with touch screen technology and animation software produced by NLM's Lister Hill Center, the onsite Turning The Pages kiosks at NLM allow a visitor to thumb through these beautiful old books virtually. In the web version, home users with an Internet connection may click and turn the pages from anywhere in the world. In both systems, patrons may magnify the pages for more detail, read or listen to explanations of the text and, in some cases, access additional information on the books in the form of curators' notes from NLM's History of Medicine Division.

NLM was able to launch TTP Online in French (Tournez Les Pages) thanks to translations done by M. Guy Cobolet, director of the Bibliothèque Interuniversitaire de Médecine et d'Odontologie, a large medical library in Paris. Tournez Les Pages offers explanations of the text, curators' notes and instructions for a francophone audience spread over Canada, Europe, North and West Africa and in French-speaking pockets around the globe. On TTP Online's main introductory page, a user may click on an icon of the French tricolor to go to the equivalent page in French. Voilà!

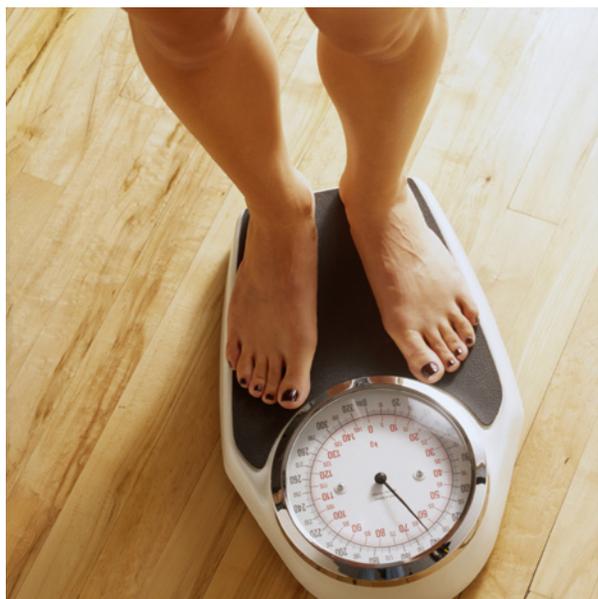
Clicking on Les Livres in the menu bar, the French-speaking user sees a list of five books, though only the first one currently has translations. This is by Ambroise Paré (1510-1590), a French surgeon from humble beginnings who would revolutionize the way surgeons treated wounds. This 1585 edition of his *Oeuvres* (Collected Works) is both his masterpiece and his monument, gathering together a lifetime's experience and study. Translations for the other books are planned.



A sample page from the new French version of Turning The Pages

### The Brain and ADHD

Much news in attention deficit hyperactivity disorder: In a study from NIMH, researchers found that brain areas controlling attention were thinnest in children with ADHD who carried a variation in a specific version of a gene. But these areas normalized in thick-



*An NIA-funded study suggests that obesity spreads within social networks—the closer the connection, the greater the influence.*

ness during these children's teen years, coinciding with clinical improvement. The results mean that though having this gene version increases risk of ADHD, it can also predict better clinical outcomes and higher IQ than two common versions of the same gene in youth with the disorder. Published in the same issue of *Archives of General Psychiatry*, a NIDA-led study documented decreased activity of the chemical dopamine in the brains of a group of adults with ADHD. Researchers knew that people with ADHD are more likely than others to

smoke and to abuse alcohol, cocaine and other drugs; the new finding fits well with such data. Decreased dopamine activity is associated with systems in the brain involved with reward, which can lead individuals to have a greater risk of substance abuse. The study also offers a better understanding of how drugs used to treat ADHD, such as Ritalin, do their jobs: they may work by amplifying dopamine in the brain. All of this follows research announced last month by NIMH and published in the *Journal of the American Academy of Child and Adolescent Psychiatry* showing that most children treated in a variety of ways for ADHD showed sustained improvement after 3 years, though an increased risk for behavioral problems in these children remained higher than normal.

### Early Childhood Program Gets Results

According to a study funded in part by NICHD, intensive early education programs can benefit kids well into their adult lives. Researchers, following the Child-Parent Centers pro-

gram for poor children in Chicago, found that program graduates showed higher education attainment, lower rates of serious crime and incarceration and lower rates of depressive symptoms by the time they reached adulthood than non-participants did. Founded in 1967, the program provides reading and math instruction from pre-kindergarten through third grade combined with frequent field trips; the kids' parents receive job-skills training, educational classes and social services. Members of the research team, whose work was published in the *Archives of Pediatrics and Adolescent Medicine*, said children who participated in the program had a greater recognition that having more education can be a way out of poverty.

### Two Studies, Two MS Discoveries

For the first time in more than 20 years, scientists have identified new genetic risk factors for multiple sclerosis. A pair of large-scale studies, supported in part by NINDS and published simultaneously in the *New England Journal of Medicine* and *Nature Genetics*, revealed two genes that influence the risk of getting MS. These findings, sought since the discovery decades ago of the only other known MS-susceptibility gene, could shed new light on the cause of MS and lead to potential treatments. The autoimmune disease typically causes limb weakness, vision loss and problems with coordination and is the most common disabling neurological disorder in young adults.

### Bad Influences

Finally, all those reports you've been hearing about how obesity can travel from friend to friend? The news comes from a study funded by NIA, using data from the Framingham Heart Study, which is supported by NHLBI. Published in the *New England Journal of Medicine*, the study found obesity spreads within social networks and that the closer the social connection, the greater the influence. Some of the findings: a key study participant's chances of becoming obese increased by 57 percent if he or she had a close friend who became obese; when two people identified each other as close friends, the key participant's risk of becoming obese if the friend did increased by 171 percent; and social distance was a much bigger factor than how far away people were geographically. In fact, researchers found that if an immediate neighbor became obese, it did not affect a person's risk. Which also may say something about how close people generally feel to their neighbors.

—compiled by Sarah Schmelling



The phone numbers for further information about the studies below are 1-866-444-2214 (TTY 1-866-411-1010) unless otherwise noted.

#### **ADHD Genetics Study**

Take part in an NIH study seeking to identify the genes that contribute to ADHD (attention deficit hyperactivity disorder).

#### **Muscular Leg Pain?**

If it is caused by blocked arteries and it occurs with activity but improves with rest, call NIH for more information on a new study.

#### **Have Enlarged Gums?**

Do you have enlarged gums and are you taking dilantin, cyclosporine or calcium channel-blockers? Take part in an NIH study.

#### **HIV+ Volunteers Needed**

HIV+ volunteers off anti-HIV medications, CD4+ count 300 or greater, needed for research study at NIH. Compensation is provided.

#### **Adults with Neurofibromatosis**

Adults with neurofibromatosis type 1 are asked to consider participating in NIH studies. All study-related tests are provided at no cost.

#### **Do You Have Ankylosing Spondylitis?**

Consider volunteering for an NIH research study. Compensation is provided.

#### **Neck Pain Study Needs Volunteers**

The Clinical Center rehabilitation medicine department is seeking individuals with neck pain and healthy volunteers between the ages of 18-65 to participate in a natural history study of neck pain (02-CC-0245). Participation involves 4 monthly visits (about 1 hour each) for a comprehensive cervical musculoskeletal examination. No compensation is provided. Contact [neckpainstudy@gmail.com](mailto:neckpainstudy@gmail.com) or (301) 451-7514.

#### **Anthrax Vaccine Study**

NICHHD is seeking healthy volunteers, 18-45 years of age, to participate in an investigational anthrax vaccine study (04-CH-0283) conducted at the Clinical Center. Medical screening will determine eligibility. Compensation will be provided. Call 1-800-411-1222 (TTY 1-866-411-1010).

#### **NIDDK Unveils Web Site Makeover**

Dynamic graphics and an enhanced layout define the redesigned web site launched by the National Institute of Diabetes and Digestive and Kidney Diseases.

NIDDK's web site reformat is aimed at best directing the site's users—scientists, health care professionals and the public—to the topics and sections they seek.

While the fundamental architecture of information remained stable in the redesign process, the committee advancing the design sought to update the site's look and feel and improve the immediate success of information seekers.

"Our new design should save researchers, health professionals and the public valuable time finding important scientific and consumer health information," said NIDDK director Dr. Griffin Rodgers. "We are continually striving to make our resources more readily available to a wider audience and in the latest formats. The web site plays a key role in helping to disseminate this information."

The NIDDK web site, which receives nearly 2 million visits per month, scored an 83 out of 100 possible points on the American Customer Satisfaction Index (ACSI) for March to June 2007, making it a top-performing site. ACSI measures the performance of about 200 private-sector companies and many government agencies. Visitors rate government web sites on various components of overall satisfaction such as ease of search and navigation, look and feel, functionality and content. Ratings are converted to a score on a 100-point scale using ACSI methodology.

The web site features a reference collection, an interactive health tools portal, an image library and portals containing health information in Spanish. To visit, go to [www.niddk.nih.gov](http://www.niddk.nih.gov)—  
**Anne Pavuk Wright**

*Name That Spot, Again!*  
**Architectural Details,  
 Functional Friends and Natural  
 Nooks**

PHOTOS: BELLE WARING

NIH has a wealth of architectural detail and landscaping refinement. As for functional components, they may not be as sweet as summer flowers, and yet if observed closely even everyday stuff shows evidence of wit and symmetry. As you walk out into the sunlight or dash from bench to bedside, how many of these can you identify?

Enter our two-part contest in this issue and the next. Tell us where on campus you find these spots. Email your answers for both parts of the contest to [warinbg@od.nih.gov](mailto:warinbg@od.nih.gov) by Sept. 17. The entrant with the most correct answers wins a prize (if there's a tie, first correct entry wins). Good luck!



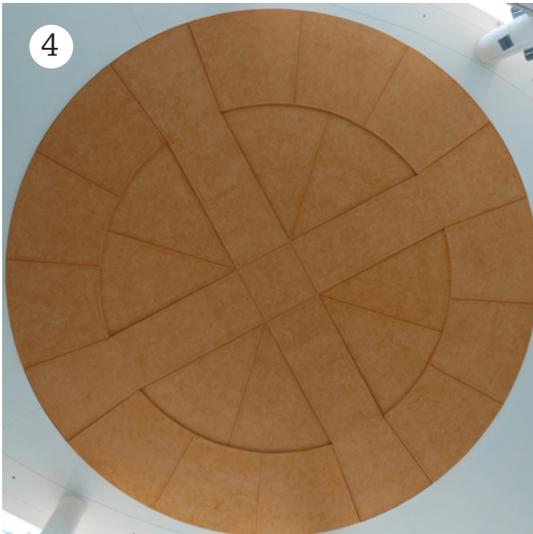
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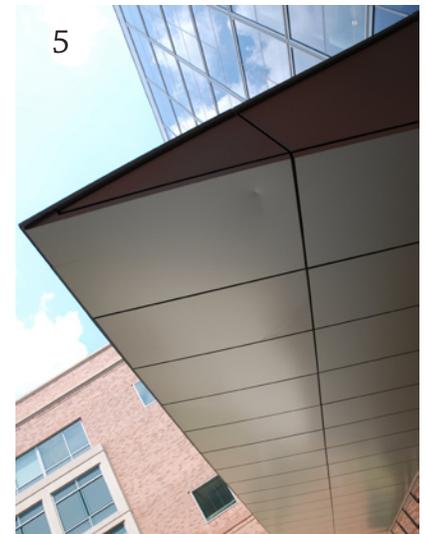
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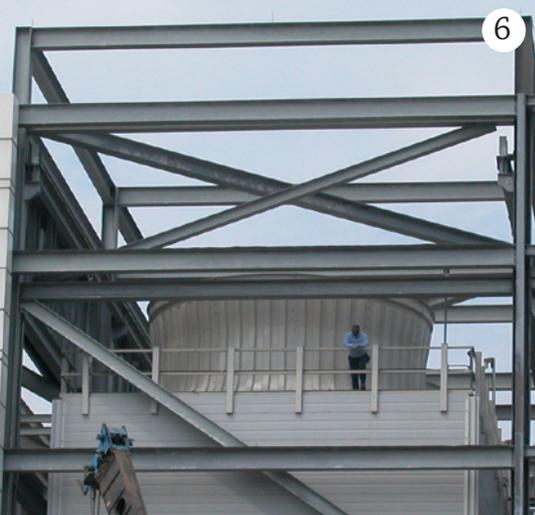
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